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IS : 9656 - 1980
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Indian Standard

SPECIFICATION FOR TRIDEMORPH EMULSIFIABLE CONCENTRATES

UDC 632·951 TRIDEMORPH : 632·981·13

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Indian Standard

SPECIFICATION FOR TRIDEMORPH EMULSIFIABLE CONCENTRATES

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(*Continued on page* 7)

AMENDMENT NO. 1 NOVEMBER 1988

TO

IS : 9656-1980 SPECIFICATION FOR TRIDEMORPH EMULSIFIABLE CONCENTRATES

(*Page* 4, *clause* **2.2.5**) — Add the following note at the end of the clause:

'NOTE — The material need not be subjected to heat treatment if it has crossed half of its shelf life as ascertained from its date of manufacture and date of expiry declared on the container.'

(AFCDC 6)

Printed at Printograph, New Delhi, India

AMENDMENT NO. 2 MAY 1994
TO
IS 9656 : 1980 SPECIFICATION FOR TRIDEMORPH EC

(*Page* 4, *clause* 2.2.5) — Delete.

(*Page* 6, *clause* 4.1) — Substitute the following for the existing:

'When freshly manufactured material in bulk quantity is offered for inspection, representative samples of the material shall be drawn and tested as prescribed in IS 10627 : 1983 within 90 days of its manufacture. When the material is offered for inspection after 90 days of its manufacture, sampling shall be done as prescribed in IS 10627 : 1983. However, the criteria for conformity of the material when tested, shall be the limits of tolerances, as applicable over the declared nominal value and given under clause 2.3.1 of the standard.'

(FAD 1)

Reprography Unit, BIS, New Delhi, India

Indian Standard

SPECIFICATION FOR TRIDEMORPH EMULSIFIABLE CONCENTRATES

0. FOREWORD

0.1 This Indian Standard was adopted by the Indian Standards Institution on 28 October 1980, after the draft finalized by the Pest Control Sectional Committee had been approved by the Agricultural and Food Products Division Council and the Chemical Division Council.

0.2 Tridemorph emulsifiable concentrates are used as a systemic fungicide with protective and curative action.

0.3 Tridemorph emulsifiable concentrate is generally manufactured to contain 80 percent (*m/m*) of tridemorph.

0.4 In the preparation of this standard due consideration has been given to the provisions of the Insecticides Act, 1968 and the Rules framed thereunder. However, this standard is subject to the restrictions imposed under these, wherever applicable.

0.5 For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test or analysis, shall be rounded off in accordance with IS : 2-1960*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

1. SCOPE

1.1 This standard prescribes the requirements and methods of sampling and test for tridemorph emulsifiable concentrates.

2. REQUIREMENTS

2.1 Constituents — The material shall consist of tridemorph technical, in suitable solvent(s) together with emulsifying agent(s) and with or without stabilizer(s).

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*Rules for rounding off numerical values (*revised*).

2.1.1 Tridemorph, technical employed in the manufacture of this material shall conform to IS : 9667-1980*.

2.2 Physical — The material shall comply with physical requirements specified in **2.2.1** to **2.2.5**.

2.2.1 *Description* — The material shall be a stable liquid free from sediment. Suspended material shall be negligible. It shall readily yield an emulsion on dilution with water, suitable for spray.

2.2.2 *Cold Test* — No turbidity or separation of solid and/or oily matter shall occur when the material is subjected to the cold test at 10°C as prescribed in **13.1** of IS : 6940-1973† or at any other lower temperature as agreed to between the purchaser and the supplier. Introduction of a seeding crystal is not necessary for the test.

2.2.3 *Flash Point (Abel)* — When determined by the method prescribed in IS : 1448 [P : 20]-1960‡, the flash point of the material shall be above 24·5°C.

2.2.4 *Emulsion Stability* — Any separation including creaming at the top or sedimentation at the bottom of 100 ml of emulsion prepared in standard hard water with 5 ml of the concentrate for public health use and with 2 ml of the concentrate for agricultural use, shall not exceed 2 ml when tested by one of the methods prescribed in **13.3** of IS : 6940-1973†.

2.2.5 *Heat Stability* — After treating in accordance with the method prescribed in **13.4** of IS : 6940-1973†, the material shall comply with the requirements specified in **2.2.1** to **2.2.4** and **2.3.1**.

2.3 Chemical — The material shall comply with the chemical requirements specified in **2.3.1** and **2.3.2**.

2.3.1 *Tridemorph Content* — When determined by the method prescribed in Appendix A of IS : 9667-1980*, the observed tridemorph content, percent (*m/m*), of any of the samples shall not differ from the declared nominal value by more than the percent tolerance limits indicated below:

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*Specification for tridemorph, technical.

†Methods of tests for pesticides and their formulations.

‡Methods of tests for petroleum and its products, P : 20 Flash point by Abel apparatus.

Nominal Value, Percent	*Tolerance, Percent*	
Up to 9	+ 10 − 5	of the nominal value
Above 9 and below 50	± 5	
50 and above	+ 5 − 3	

2.3.1.1 The actual value of tridemorph content in the formulation shall be calculated to the second decimal place for rounding off to the first decimal place before applying the tolerance given in **2.3.1**.

2.3.1.2 The average content of all samples taken shall not be lower than the nominal content.

2.3.2 *Acidity* — When tested by the method prescribed in **11.3** of IS : 6940-1973*, acidity (as H_2SO_4) shall be not more than 0·5 percent by mass.

3. PACKING AND MARKING

3.1 Packing — The material shall be packed as per requirements given in IS : 8190 (Part II)-1980†.

3.2 Marking — The containers shall bear legibly and indelibly the following information in addition to the information necessary under the Insecticides Act and Rules:

a) Name of the material and its end use;

b) Name of the manufacturer;

c) Date of manufacture;

d) Batch number;

e) Net volume;

f) Nominal tridemorph content, percent (*m/m*); and

g) The cautionary notice as worded in the Insecticides Act and Rules.

---

*Methods of tests for pesticides and their formulations.

†Requirements for packing of pesticides: Part II Liquid pesticides (*first revision*).

3.2.1 Each container may also be marked with the ISI Certification Mark.

NOTE — The use of the ISI Certification Mark is governed by the provisions of the Indian Standards Institution (Certification Marks) Act and the Rules and Regulations made thereunder. The ISI Mark on products covered by an Indian Standard conveys the assurance that they have been produced to comply with the requirments of that standard under a well-defined system of inspection, testing and quality control which is devised and supervised by ISI and operated by the producer. ISI marked products are also continuously checked by ISI for conformity to that standard as a further safeguard. Details of conditions under which a licence for the use of the ISI Certification Mark may be granted to manufacturers or processors, may be obtained from the Indian Standards Institution.

4. SAMPLING

4.1 Representative samples of the material shall be drawn as prescribed in the 'Indian standard methods for sampling of pesticides and theii formulations' (*under preparation*).

NOTE — Till such time this standard under preparation is published, the samples shall be drawn as agreed to between the parties concerned.

5. TESTS

5.1 Tests shall be carried out by the appropriate methods referred to in **2.2.2** to **2.2.5**, **2.3.1** and **2.3.2**.

5.2 Quality of Reagents — Unless specified otherwise, pure chemicals and distilled water (*see* IS: 1070-1977*) shall be employed in the tests.

NOTE — 'Pure chemicals' shall mean chemicals that do not contain impurities which affect the results of analysis.

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*Specification for water for general laboratory use (*first revision*).

(*Continued from page* 2)

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INDIAN STANDARDS ON PESTICIDES (EMULSIFIABLE CONCENTRATES)

IS:	
632-1978	Gamma-BHC (lindane) emulsifiable concentrates (*fourth revision*)
633-1975	DDT emulsifiable concentrates (*first revision*)
1307-1973	Aldrin emulsifiable concentrates (*first revision*)
1833-1980	Diazinon, technical (*first revision*)
2567-1978	Malathion emulsifiable concentrates (*second revision*)
2682-1966	Chlordane emulsifiable concentrates (*first revision*)
2861-1980	Diazinon emulsifiable concentrates (*first revision*)
2865-1978	Methyl parathion emulsifiable concentrates (*first revision*)
3903-1975	Dimethoate emulsifiable concentrates (*first revision*)
3905-1966	Thiometon emulsifiable concentrates
4323-1967	Endosulfan emulsifiable concentrates
4325-1967	Binapacryl emulsifiable concentrates
4808-1968	Pyrethrum emulsifiable concentrates
5277-1978	Dichlorvos emulsifiable concentrates (*first revision*)
5279-1969	Dicofol emulsifiable concentrates
5281-1980	Fenitrothion emulsifiable concentrates (*first revision*)
6014-1978	Emulsifiable larvicidal oil, pyrethrum based (*first revision*)
6439-1978	Heptachlor emulsifiable concentrates (*first revision*)
7946-1976	Toxaphene emulsifiable concentrates
7948-1976	Fenthion emulsifiable concentrates
8026-1976	Formothion emulsifiable concentrates
8027-1976	Propanil emulsifiable concentrates
8028-1976	Quinalphos emulsifiable concentrates
8259-1976	Oxydemeton methyl emulsifiable concentrates
8291-1976	Phenthoate emulsifiable concentrates
8487-1977	Phosalone emulsifiable concentrates
8498-1977	Temephos emulsifiable concentrates
8944-1978	Chlorpyrifos emulsifiable concentrates
8955-1978	Edifenphos emulsifiable concentrates
8957-1978	Nitrofen emulsifiable concentrates
8959-1978	Fluchloralin emulsifiable concentrates
9354-1980	Alachlor emulsifiable concentrates
9356-1980	Butachlor emulsifiable concentrates
9358-1980	Triallate emulsifiable concentrates

INTERNATIONAL SYSTEM OF UNITS (SI UNITS)

Base Units

Quantity	Unit	Symbol
Length	metre	m
Mass	kilogram	kg
Time	second	s
Electric current	ampere	A
Thermodynamic temperature	kelvin	K
Luminous intensity	candela	cd
Amount of substance	mole	mol

Supplementary Units

Quantity	Unit	Symbol
Plane angle	radian	rad
Solid angle	steradian	sr

Derived Units

Quantity	Unit	Symbol	Definition
Force	newton	N	1 N = 1 kg.m/s^2
Energy	joule	J	1 J = 1 N.m
Power	watt	W	1 W = 1 J/s
Flux	weber	Wb	1 Wb = 1 V.s
Flux density	tesla	T	1 T = 1 Wb/m^2
Frequency	hertz	Hz	1 Hz = 1 c/s (s^{-1})
Electric conductance	siemens	S	1 S = 1 A/V
Electromotive force	volt	V	1 V = 1 W/A
Pressure, stress	pascal	Pa	1 Pa = 1 N/m^2

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